

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hitoshi FUKUSHIMA et al. Art Unit : Unknown
Serial No. : Not assigned yet Examiner : Unknown
Filed : June 1, 2001
Title : MANUFACTURE OF A MICROSENSOR EVICE AND A METHOD FOR
EVALUATING THE FUNCTION OF A LIQUID BY THE USE THEREOF

#3/12
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Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Prior to examination, please amend the application as follows:

In the specification:

Please replace the paragraph beginning at page 1, line 12 with the following rewritten paragraph:

A biosensor system as a means to monitor a biological function instantaneously has been intensively studied and developed for practical applications heretofore. The basic composition of a biosensor consists of a section for detecting a biological substance and a section for transducing a signal. A biological substance is complexed with the recognizing component of the biosensor, and ensures an ability to detect a bio-molecule, while the signal transducing section transduces a change obtained through the detection of a biological substance into an electric signal. There are many kinds of biological substances which can be detected on the basis of their molecular properties, and they include enzymes, antibodies, binding proteins, lectin, receptors, etc. Examples of biological substances include those that have a molecule recognizing ability and/or catalyzing function. They include enzymes, complex enzyme systems, intracellular organelles, microorganisms, animal cells, plant cells, etc. The catalytic activity of these substances depends on the structure characteristic with enzymes, and can be approximated, in its essence, by the kinetic equation by Michaelis and Menten. Other examples include substances that have a molecule recognizing function, and which forms a stable complex through a biological affinity. They include antibodies, lectin, binding proteins, receptors, etc. The basic designing of a bio-sensor proceeds with attention paid to the above properties. With the recent development of biotechnology, the range of biological substances available for the biosensor has been widened, and thus thermo-resistive enzymes, monoclonal